

Application. № 10/675,380
Response Dated December 17, 2010
Reply to Final Office Action of August 17, 2010

REMARKS / ARGUMENTS

Claims 1-31 are pending in the instant application. Claims 1, 11 and 21 are independent. Claims 2-10, 12-20 and 22-31 depend from independent claims 1, 11 and 21, respectively. Claims 5-6, 15-16, and 25-26 have been cancelled. Claims 1-4, 7, 9-14, 17, 19-24, 27, and 29-31 have been amended. The Applicant respectfully requests reconsideration of the claims in light of the above amendments and the following remarks.

I. THE PROPOSED COMBINATION OF ROCHBERGER, SCHWENGLER AND DEKONING DOES NOT RENDER CLAIMS 1, 2-8, 10-12, 14-18, 20-22, 24-28 AND 30-31 UNPATENTABLE

A. INDEPENDENT CLAIMS 1, 11 AND 21

Claim 1 recites, in part, “wherein each network connection on said physical communication path has a corresponding redundant network connection on said logical communication path, *wherein at least a first portion of said logical communication path and at least a second portion of said logical communication path utilize different communication protocols and handle communication of different communication types*, and wherein both of said physical and logical communication paths are established through the same plurality of network nodes” (emphasis added). In this regard, the Examiner has equated Applicant’s physical communication path and logical

Application. № 10/675,380
Response Dated December 17, 2010
Reply to Final Office Action of August 17, 2010

communication path to Rochberger's paths going through elements 16-18 and elements 24-26, respectively. (See e.g., Final Office Action, pages 2-3). However, Rochberger's two communication paths are neither "established through the same plurality of network nodes" nor are they of different communication types.

The Examiner recognizes this deficiency of Rochberger and concedes that "Rochberger does not explicitly teach, primary and secondary path being different communication type." (See, e.g., *id.*). In order to make up for this deficiency in Rochberger, the Examiner proposes combining Rochberger with Schwengler (See, e.g., Final Office Action at pages 3-4). In this regard, the Examiner states:

Schwengler in the same or similar field of endeavor teaches primary and secondary path being different communication type (Abstract, column 3 lines 53-55, the redundant or secondary communication path may be a different line of sight path to the same or a different transmitter, or may be a lower frequency communication path. It is to be appreciated that this embodiment of the present invention, utilizing a primary and a secondary transmitter, allows a lower frequency non-line of sight link to be used as a backup for a primary communication path that does require line of sight).

(See, e.g., *id.*). Putting aside for the moment whether or not this is an accurate assessment of Schwengler, the Examiner has failed to provide "articulated reasoning with some rationale underpinning to support the legal conclusion of obviousness" in the detailed manner described in *KSR*. Rather, the Examiner attempts to support the claim rejections as follows:

It would have been obvious to one having ordinary skill in the art at the

Application. № 10/675,380
Response Dated December 17, 2010
Reply to Final Office Action of August 17, 2010

time the invention was made to incorporate in Rochberger's system/method the steps of primary and secondary path being different communication type as suggested by Schwengler. *The motivation is that (as suggested by Schwengler, column 4 lines 42-47) by using different communication types for primary and backup paths, network can be made to be more reliable in case of failure in the primary path; thus overcome the problems associated with primary path failure by utilizing the appropriate different communication path to get around the fault.* Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

(*Id.* (emphasis added).) In other words, the Examiner apparently alleges that because Schwengler teaches a way to overcome large obstructions in the line of site path of a transmission, a person of ordinary skill in the art somehow would have been motivated to incorporate Schwengler's alleged teaching of "primary and secondary path being different communication type" into Rochberger's. The Examiner fails to explain any plausible motivation for making this combination. The Examiner also makes the unsupported allegation that "by using different communication types for primary and backup paths, network can be made to be more reliable in case of failure in the primary path." (See OA, p. 3.). The Examiner provides no explanation of how Rochberger's network would allegedly be enhanced and made more reliable. Notably, the Examiner has ignored the fact that Rochberger relates to Asynchronous Transfer Mode (ATM) networks, which are based on wired data transmissions. Why would a person of ordinary skill in the art incorporate Schwengler's alleged teaching ("primary and

Application. № 10/675,380
Response Dated December 17, 2010
Reply to Final Office Action of August 17, 2010

secondary path being different communication type") into Rochberger's wired ATM system if, Schwengler addresses *line-of-sight problem associated only with wireless transmissions in a Local Multipoint Distribution System (LMDS)*? The answer is that a person of ordinary skill in the art simply would not make this combination. There would be no need to use primary and secondary paths of different communication type to remedy "large obstruction" problems in line of site transmissions, since such problems would not exist (and are not an issue) with ATM wired transmissions disclosed by Rochberger (the Applicant has addressed the additional deficiency of Schwengler herein below, namely, Schwengler's first and second communication paths do not use different communication protocols and they are not of different communication types).

In conclusion, there simply is no rational basis for combining the references in the manner suggested by the Examiner. Instead, the Examiner appears to be proposing the combination based solely on improper hindsight. As such, the rejections based on the proposed commination of Rochberger and Schwengler are improper and should be withdrawn.

Moreover, even if the references are combined in the manner suggested by the Examiner, independent claims 1, 11, and 21 are still patentable because the resulting combination does not include at least the following limitation of claim 1: "wherein each network connection on said physical communication path has a corresponding

Application. № 10/675,380
Response Dated December 17, 2010
Reply to Final Office Action of August 17, 2010

redundant network connection on said logical communication path, *wherein at least a first portion of said logical communication path and at least a second portion of said logical communication path utilize different communication protocols and handle communication of different communication types*, and wherein both of said physical and logical communication paths are established through the same plurality of network nodes," as recited by the Applicant in the amended independent claim 1.

The Final Office Action states the following:

Regarding claim 1, Rochberger teaches a method comprising: establishing a second communication path (figures 1 or 2 or 3 or 10 or 11 or 12 or 15 or 16, path going through elements 24 and 26) that is independent of a first communication path (figures 1 or 2 or 3 or 10 or 11 or 12 or 15 or 16, path going through elements 16 and 18) that couples at least two end points via at least a first broadband (i.e. ATM) network (column 10, lines 14-20, the principle of the method of the first embodiment is that two call paths are set up between the source and destination nodes: a primary call path and a redundant, i.e., secondary, call path. The two call paths are, however, associated with each other in the switching tables of the two end nodes, i.e., the source and destination nodes), wherein each network connection on first communication path (figures 1 or 2 or 3 or 10 or 11 or 12 or 15 or 16, path going through elements 16 and 18) between at least two end points (column 10 line 20, two end nodes, i.e., the source and destination nodes), has a corresponding redundant network connection (figures 1 or 2 or 3 or 10 or 11 or 12 or 15 or 16, path going through elements 24 and 26) on second communication path, and wherein first and second communication paths are of different types (column 10 lines 14-20, different types are satisfied by one path being primary and the other being redundant); and transferring information that would be normally transferred over first communication path between at least two endpoints via established second communication path over corresponding redundant network connection (column 12 lines 10-15, at this point, data

Application. № 10/675,380
Response Dated December 17, 2010
Reply to Final Office Action of August 17, 2010

flows from the source user to the destination user over the redundant path (which is now the active path). Both the source and destination users are unaware that a break occurred in the active path aside from a short interruption in the flow of data cells).

Rochberger does not explicitly teach, primary and secondary path being different communication type.

Schwengler in the same or similar field of endeavor teaches primary and secondary path being different communication type (Abstract, column 3 lines 53-55, the redundant or secondary communication path may be a different line of sight path to the same or a different transmitter, or may be a lower frequency communication path. It is to be appreciated that this embodiment of the present invention, utilizing a primary and a secondary transmitter, allows a lower frequency non-line of sight link to be used as a backup for a primary communication path that does require line of sight).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Rochberger's system/method the steps of primary and secondary path being different communication type as suggested by Schwengler. The motivation is that (as suggested by Schwengler, column 4 lines 42-47) by using different communication types for primary and backup paths, network can be made to be more reliable in case of failure in the primary path; thus overcome the problems associated with primary path failure by utilizing the appropriate different communication path to get around the fault. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

Rochberger and Schwengler do not explicitly teach both of a first and a second communication paths are established through same plurality of network nodes.

DeKoning in the similar field of endeavor related to data communication teaches both of a first and a second communication paths are established through same plurality of network nodes (Figure 3, column

Application. № 10/675,380
Response Dated December 17, 2010
Reply to Final Office Action of August 17, 2010

11 lines 4-21).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Rochberger and Schwengler's system/method the steps of both of a first and a second communication paths are established through same plurality of network nodes as suggested by DeKoning. The motivation is that (as suggested by DeKoning, column 21 lines 53-64) such method provides enhanced redundancy. Known work (both of a first and a second communication paths are established through same plurality of network nodes) in one field of endeavor (DeKoning prior art) may prompt variations of it for use in either the same field or a different one (Rochberger and Schwengler prior art) based on design incentives (enhanced redundancy) or other market forces/market place incentives if the variations are predictable (multiple connection for enhanced redundancy is predictable) to one of ordinary skill in the art.

See Final Office Action at pages 1-3. With regard to the above limitation, the Examiner relies for support on col. 4, lines 42-47 of Schwengler. However, the Applicant points out that in light of the above amendments to the independent claims, the Schwengler reference is deficient at least for the following reasons.

Schwengler only relates to transmissions in the Microwave band of the spectrum (e.g., frequencies greater than 12 GHz and going up to 30 GHz, which is the typical frequency range for LMDS type communications using line of site transmission). (See Schwengler, col. 3, lines 11-17). In this regard, even though Schwengler discloses using different communication paths or different frequencies for a given communication path, the fact remains that Schwengler uses only one type of communication path at a time, e.g., in the Microwave band, which is associated with only one communication

Application. № 10/675,380
Response Dated December 17, 2010
Reply to Final Office Action of August 17, 2010

protocol. Therefore, Schwengler does not overcome the deficiencies of Rochberger. In the 10/4/2010 Advisory Office Action, the Examiner presents arguments and alleges that LOS (line of sight) and NLOS (non-line of sight) communications use different communication protocols. Even if we assume, arguendo, that this premise is true, the Examiner's arguments regarding Schwengler are moot since Schwengler does not disclose "*wherein at least a first portion of said logical communication path and at least a second portion of said logical communication path utilize different communication protocols and handle communication of different communication types.*" Schwengler uses *only one* communication path at a time (either LOS or NLOS) and, therefore, cannot disclose that specific portions of the selected communication path (LOS or NLOS) use different communication protocols.

With regard to the DeKoning reference, the Applicant points out that it also deficient since it also does not disclose "*wherein each network connection on said physical communication path has a corresponding redundant network connection on said logical communication path, wherein at least a first portion of said logical communication path and at least a second portion of said logical communication path utilize different communication protocols and handle communication of different communication types,* and wherein both of said physical and logical communication paths are established through the same plurality of network nodes."

 Even though

Application. № 10/675,380
Response Dated December 17, 2010
Reply to Final Office Action of August 17, 2010

DeKoning discloses redundant connections (between RDACs 118.1, 118.2 and disk arrays 108, 108.1), such connections are just duplicative connections of the *same* type (FC-AL) as the main connections, and using the same communication protocol. DeKoning, therefore, does not overcome the above deficiencies of Rochberger and Schwengler.

Accordingly, the proposed combination of Rochberger, Schwengler and DeKoning does not render independent claim 1 unpatentable, and a *prima facie* case of obviousness has not been established. The Applicant submits that claim 1 is allowable. Independent claims 11 and 21 are similar in many respects to the method disclosed in independent claim 1. Therefore, the Applicant submits that independent claims 11 and 21 are also allowable over the references cited in the Final Office Action at least for the reasons stated above with regard to claim 1.

II. REJECTION OF DEPENDENT CLAIMS 2-8, 10, 12, 14-18, 20, 22, 24-28 AND 30-31

Based on at least the foregoing, the Applicant believes the rejection of independent claims 1, 11 and 21 under 35 U.S.C. § 103(a) as being unpatentable over Rochberger in view of Schwengler and DeKoning has been overcome and requests that the rejection be withdrawn. Additionally, claims 2-8, 10, 12, 14-18, 20, 22, 24-28 and 30-31 depend from independent claims 1, 11 and 21, respectively, and are,

Application. № 10/675,380
Response Dated December 17, 2010
Reply to Final Office Action of August 17, 2010

consequently, also respectfully submitted to be allowable based on the above arguments.

The Applicant also reserves the right to argue additional reasons beyond those set forth above to support the allowability of claims 2-8, 10, 12, 14-18, 20, 22, 24-28 and 30-31.

III. THE PROPOSED COMBINATION OF ROCHBERGER, SCHWENGLER, DEKONING AND DOI DOES NOT RENDER CLAIMS 3, 9, 13, 19, 23 AND 29 UNPATENTABLE

Based on at least the foregoing, the Applicant believes the rejection of independent claims 1, 11 and 21 under 35 U.S.C. § 103(a) as being anticipated by the combination of Rochberger, Schwengler and DeKoning has been overcome and requests that the rejection be withdrawn. Additionally, since the additional cited reference (Doi) does not overcome the deficiencies of Rochberger, claims 3, 9, 13, 19, 23 and 29 depend from independent claims 1, 11 and 21, respectively, and are, consequently, also respectfully submitted to be allowable based on the above arguments. The Applicant also reserves the right to argue additional reasons beyond those set forth above to support the allowability of claims 3, 9, 13, 19, 23 and 29.

Application. № 10/675,380
Response Dated December 17, 2010
Reply to Final Office Action of August 17, 2010

In general, the Final Office Action makes various statements regarding claims 1-31 and the cited references, which statements are now moot in light of the above. Thus, the Applicant will not address such statements at the present time. However, the Applicant expressly reserves the right to challenge such statements in the future should the need arise (e.g., if such statement should become relevant by appearing in a rejection of any current or future claim).

Application. № 10/675,380
Response Dated December 17, 2010
Reply to Final Office Action of August 17, 2010

CONCLUSION

Based on at least the foregoing, Applicant believes that all pending claims 1-31 are in condition for allowance. If the Examiner disagrees, the Applicant respectfully requests a phone interview, and requests that the Examiner telephone the undersigned at 312-775-8000.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to the deposit account of McAndrews, Held & Malloy, Ltd., Account No. 13-0017.

A Notice of Allowability is courteously solicited.

Respectfully submitted,

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